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| APPLICATION NO.                                                     | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.           | CONFIRMATION NO. |
|---------------------------------------------------------------------|-------------|----------------------|-------------------------------|------------------|
| 10/688,608                                                          | 10/17/2003  | Oliver C. Ibe        | 0012.0001US1                  | 2438             |
| 29127                                                               | 7590        | 05/22/2007           |                               |                  |
| HOUSTON ELISEEVA<br>4 MILITIA DRIVE, SUITE 4<br>LEXINGTON, MA 02421 |             |                      | EXAMINER<br>MILLER, BRANDON J |                  |
|                                                                     |             |                      | ART UNIT                      | PAPER NUMBER     |
|                                                                     |             |                      | 2617                          |                  |
|                                                                     |             |                      | MAIL DATE                     | DELIVERY MODE    |
|                                                                     |             |                      | 05/22/2007                    | PAPER            |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/688,608

**Applicant(s)**

IBE ET AL.

**Examiner**

Brandon J. Miller

**Art Unit**

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5-7, 10 and 12-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-7, 10 and 12-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

**DETAILED ACTION**

***Response to Amendment***

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 5, 7, 10, and 25-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Oda et al. (US 7,177,636 B2).

Regarding claim 5 Oda wherein the mobile terminal does not register in the cellular carrier network as it moves from the local area network into the cellular carrier network and the mobile terminal inherits call parameters of the controller and switches its radio to the cellular carrier network using the call parameters (see col. 17, lines 34-46).

Regarding claim 7 Oda teaches a flexible method of handling calls between a wireless local area network of an enterprise and a cellular carrier network (see col. 6, lines 34-38, 45-51, & 65-67 and col. 7, lines 1-15 & 44-49). Oda teaches a controller registering and emulating a mobile terminal, which is capable of communicating over the wireless local area network and the cellular network, on the cellular carrier network when the mobile terminal is communicating via the wireless local area network within the enterprise (see col. 7, lines 44-49, col. 17, lines 34-46, and FIG. 20, proxy terminal installed in CPS relates to controller). Oda teaches calls from the cellular carrier network being received via a fixed radio terminal of the controller, the controller

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routing the calls received from the cellular carrier network to the mobile terminal over the wireless local area network; and the controller maintaining the calls over the cellular carrier network through the fixed radio terminal and over the wireless local area network to the mobile terminal (see col. 19, lines 25-55 and FIGS. 18 & 20).

Regarding claim 10 Oda teaches a system for managing calls between a wireless local area network and a cellular carrier network (see col. 6, lines 34-38, 45-51, & 65-67 and col. 7, lines 1-15). Oda teaches a dual mode mobile terminal capable of communicating over the wireless local area network and the cellular carrier network (see col. 7, lines 44-49). Oda teaches a controller registering and emulating a mobile terminal, which is capable of communicating over the wireless local area network and the cellular network, on the cellular carrier network when the mobile terminal is communicating via the wireless local area network within the enterprise (see col. 7, lines 44-49, col. 17, lines 34-46, and FIG. 20, proxy terminal installed in CPS relates to controller). Oda teaches calls from the cellular carrier network being received via a fixed radio terminal of the controller, the controller routing the calls received from the cellular carrier network to the mobile terminal over the wireless local area network; and the controller maintaining the calls over the cellular carrier network through the fixed radio terminal and over the wireless local area network to the mobile terminal (see col. 19, lines 25-55 and FIGS. 18 & 20).

Regarding claim 25 Oda teaches wherein the controller implements CDMA-to-VoIP conversion (see col. 6, lines 34-38 and col. 14, lines 1-4).

Regarding claim 26 Oda teaches a device as recited in claim 5 and is rejected given the same reasoning as above

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oda et al. (US 7,177,636 B2).

Regarding claim 6 Oda teaches a device as recited in claim 1 except for wherein the controller implements TDMA-to-VoIP conversion. Oda does teach wherein the controller implements cellular-to-VoIP conversion (see col. 6, lines 34-38 and col. 14, lines 1-4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include TDMA-to-VoIP conversion because Oda teaches using various cellular communication networks within the context of the invention (see col. 6, lines 34-38).

Claims 12-13 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oda et al. (US 7,177,636 B2) in view of Pan et al. (US 2004/0002335 A1).

Regarding claim 12 Oda teaches a device as recited in claim 10 except for wherein the mobile terminal is assigned two telephone numbers, one for the cellular carrier network and one for a private branch exchange. Pan teaches wherein the mobile terminal is assigned two telephone numbers, one for the two networks (see paragraph [0025]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include wherein the mobile terminal is assigned two telephone numbers, one for the

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cellular carrier network and one for a private branch exchange because Oda teaches methods for routing between cellular networks and other wireless networks and this would allow for improved method of utilizing a cellular network by way of an IP network.

Regarding claim 13 Oda and Pan teaches a device as recited in claim 12 except for calls placed to the telephone number of the cellular carrier network are received by the controller and routed to the mobile terminal via the wireless local area network when the mobile terminal is on the local area network and calls placed to the telephone number of the private branch exchange are received by the controller and routed to the terminal via the wireless local area network when the mobile terminal is on the local are network. Oda does teach calls placed to a cellular carrier network are received by the controller and routed to the mobile terminal via the wireless local area network when the mobile terminal is on the local area network (see col. 19, lines 25-55 and FIGS. 18 & 20). Pan does teach a private branch exchange and switching calls placed to the private branch exchange (see paragraphs [0003] – [0004]). Pan does teach wherein calls placed to a telephone number of a cellular carrier network are received by the controller and routed to the mobile terminal via the wireless local area network when the mobile terminal is on the local area network (see paragraphs [0037] & [0038]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include wherein calls placed to the telephone number of the cellular carrier network are received by the controller and routed to the mobile terminal via the wireless local area network when the mobile terminal is on the local area network and calls placed to the telephone number of the private branch exchange are received by the controller and routed to the terminal via the wireless local area network when the mobile terminal is on the local are network because Oda teaches methods for

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routing between cellular networks and other wireless networks and this would allow for improved method of utilizing a cellular network by way of an IP network.

Regarding claim 27 Oda and Pan teach a device as recited in claim 12 and is rejected given the same reasoning as above.

Regarding claim 28 Oda and Pan teach a device as recited in claim 27 and is rejected given the same reasoning as above.

Claims 14-16, 20-22, and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oda et al. (US 7,177,636 B2) in view of Bridgelall (US 2002/0085516 A1).

Regarding claim 14 Oda teaches a device as recited in claim 10 except for wherein the mobile terminal attempts to register with the wireless local area network and only registers with the cellular carrier network if registration with the wireless local area network is unsuccessful. Bridgelall teaches wherein the mobile terminal attempts to register with the wireless local area network and only registers with the cellular carrier network if registration with the wireless local area network is unsuccessful (see paragraph [0075]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include wherein the mobile terminal attempts to register with the wireless local area network and only registers with the cellular carrier network if registration with the wireless local area network is unsuccessful because both Oda and Bridgelall teach methods for routing between cellular networks and other wireless networks and the combination and the combination would allow for improved method of utilizing a cellular network by way of an IP network.

Regarding claim 15 Oda teaches a device as recited in claim 10 except for wherein the calls are monitored for call quality over the wireless local area network. Bridgelall teaches

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wherein the calls are monitored for call quality over the wireless local area network (see paragraph [0075], signal strength degradation relates to call quality). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include wherein the calls are monitored for call quality over the wireless local area network because both Oda and Bridgelall teach methods for routing between cellular networks and other wireless networks and the combination would allow for improved method of utilizing a cellular network by way of an IP network.

Regarding claim 16 Bridgelall teaches wherein the call quality degrades to a threshold, the mobile terminal switches to communicating over the cellular carrier network (see paragraph [0075], signal strength degradation relates to call quality).

Regarding claim 20 Oda and Bridgelall teach a device as recited in claim 15 and is rejected given the same reasoning as above.

Regarding claim 21 Oda and Bridgelall teach a device as recited in claim 16 and is rejected given the same reasoning as above.

Regarding claim 22 Oda and Bridgelall teaches a device as recited in claim 21 except for wherein when the call quality degrades to the threshold, the controller monitors communications for the mobile terminal on the cellular carrier network maintaining the call and sends communications to the mobile terminal via the local area network and communications from the mobile terminal to the cellular carrier network via a fixed antenna. Bridgelall does teach wherein when the call quality degrades to the threshold, the controller monitors communications for the mobile terminal on the cellular carrier network maintaining the call and sends communications to the mobile terminal via the local area network and communications from the mobile terminal to



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the cellular carrier network via a fixed antenna (see paragraphs [0075] & [0076] and FIG. 13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include wherein when the call quality degrades to the threshold, the controller monitors communications for the mobile terminal on the cellular carrier network maintaining the call and sends communications to the mobile terminal via the local area network and communications from the mobile terminal to the cellular carrier network via a fixed antenna because both Oda and Bridgelall teach methods for routing between cellular networks and other wireless networks and the combination would allow for improved method of utilizing a cellular network by way of an IP network.

Regarding claim 29 Oda and Bridgelall teach a device as recited in claim 14 and is rejected given the same reasoning as above.

Regarding claim 30 Oda and Bridgelall n teach a device as recited in claim 15 and is rejected given the same reasoning as above.

Regarding claim 31 Oda and Bridgelall teach a device as recited in claim 16 and is rejected given the same reasoning as above.

Claims 17-19, 23-24, and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oda et al. (US 7,177,636 B2) in view of Bridgelall (US 2002/0085516 A1) and Pan et al. (US 2004/0002335 A1).

Regarding claim 17 Oda and Bridgelall teach a device as recited in claim 16 except for wherein if the call is on a phone number of a private branch, when mobile terminal is switching to communicating over the cellular carrier network, then the controller calls a telephone number of the mobile terminal on the cellular carrier network and routes the call to the mobile terminal

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through the cellular carrier network. Oda does teach calls placed to a cellular carrier network are received by the controller and routed to the mobile terminal via the wireless local area network when the mobile terminal is on the local area network (see col. 19, lines 25-55 and FIGS. 18 & 20). Pan does teach a private branch exchange and switching calls placed to the private branch exchange (see paragraphs [0003] – [0004]). Pan does teach wherein calls placed to a telephone number of a cellular carrier network are received by the controller and routed to the mobile terminal via the wireless local area network when the mobile terminal is on the local area network (see paragraphs [0037] & [0038]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include wherein if the call is on a phone number of a private branch, when mobile terminal is switching to communicating over the cellular carrier network, then the controller calls a telephone number of the mobile terminal on the cellular carrier network and routes the call to the mobile terminal through the cellular carrier network because this would allow for improved implementation of bi-directional handovers between a cellular network and another wireless network without cellular network intervention.

Regarding claim 18 Pan teaches wherein if the call is on a phone number of the cellular carrier network, when mobile terminal is switching to communicating over the cellular carrier network, then the controller handoffs the call to the mobile terminal, which then activates communications for the cellular carrier network (see paragraphs [0037] & [0038], media gateway relates to controller).

Regarding claim 19 Pan teaches a device as recited in claim 18 and is rejected given the same reasoning as above.

Regarding claim 23 Oda teaches a system for managing calls between a wireless local area network and a cellular carrier network (see col. 6, lines 34-38, 45-51, & 65-67 and col. 7, lines 1-15). Oda teaches a dual mode mobile terminal capable of communicating over the wireless local area network and the cellular carrier network (see col. 7, lines 44-49). Oda teaches a controller registering and emulating a mobile terminal, which is capable of communicating over the wireless local area network and the cellular network, on the cellular carrier network when the mobile terminal is communicating via the wireless local area network within the enterprise (see col. 7, lines 44-49, col. 17, lines 34-46, and FIG. 20, proxy terminal installed in CPS relates to controller). Oda teaches calls from the cellular carrier network being received via a fixed radio terminal of the controller, the controller routing the calls received from the cellular carrier network to the mobile terminal over the wireless local area network; and the controller maintaining the calls over the cellular carrier network through the fixed radio terminal and over the wireless local area network to the mobile terminal (see col. 19, lines 25-55 and FIGS. 18 & 20). Oda teaches calls placed to a cellular carrier network are received by the controller and routed to the mobile terminal via the wireless local area network when the mobile terminal is on the local area network enterprise (see col. 7, lines 44-49, col. 17, lines 34-46, and FIG. 20, proxy terminal installed in CPS relates to controller). Oda teaches when the mobile terminal is communicating over the cellular carrier network, the controller communicates with mobile terminal on the cellular carrier network and routes the call to the mobile terminal through the cellular carrier network (see col. 19, lines 25-55 and FIGS. 18 & 20). Oda does not specifically teach wherein the mobile terminal is assigned two telephone numbers, one for the cellular carrier network and one for a private branch exchange, calls placed to the telephone number of the

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private branch exchange received by the controller and routed to the terminal via the wireless local area network, wherein the mobile terminal attempts to register with the wireless local area network and only registers with the cellular carrier network if registration with the wireless local area network is unsuccessful, a phone number of a private branch and a telephone number of the mobile terminal on the cellular carrier network, and wherein if the call is on a phone number of the cellular carrier network, when mobile terminal is switching to communicating over the cellular carrier network, then the controller handoffs the call to the mobile terminal, which then activates communications for the cellular carrier network. Pan teaches wherein the mobile terminal is assigned two telephone numbers, one for the two networks (see paragraph [0025]). Pan teaches a private branch exchange and switching calls placed to the private branch exchange (see paragraphs [0003] – [0004]). Pan teaches wherein if the call is on a phone number of the cellular carrier network, when mobile terminal is switching to communicating over the cellular carrier network, then the controller handoffs the call to the mobile terminal, which then activates communications for the cellular carrier network (see paragraphs [0037] & [0038], media gateway relates to controller). Bridgelall teaches wherein the mobile terminal attempts to register with the wireless local area network and only registers with the cellular carrier network if registration with the wireless local area network is unsuccessful (see paragraph [0075]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include wherein the mobile terminal is assigned two telephone numbers, one for the cellular carrier network and one for a private branch exchange, calls placed to the telephone number of the private branch exchange received by the controller and routed to the terminal via the wireless local area network, wherein the mobile terminal attempts to register

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with the wireless local area network and only registers with the cellular carrier network if registration with the wireless local area network is unsuccessful, a phone number of a private branch and a telephone number of the mobile terminal on the cellular carrier network, and wherein if the call is on a phone number of the cellular carrier network, when mobile terminal is switching to communicating over the cellular carrier network, then the controller handoffs the call to the mobile terminal, which then activates communications for the cellular carrier network because Oda, Bridgelall, and Pan teach methods for routing between cellular networks and other wireless networks and the combination would allow for improved method of utilizing a cellular network by way of an IP network.

Regarding claim 24 Oda, Bridgelall, and Pan teach a device as recited in claim 23 except for wherein when the call quality degrades to the threshold, the controller monitors communications for the mobile terminal on the cellular carrier network maintaining the call and sends communications to the mobile terminal via the local area network and communications from the mobile terminal to the cellular carrier network via a fixed antenna. Bridgelall does teach wherein when the call quality degrades to the threshold, the controller monitors communications for the mobile terminal on the cellular carrier network maintaining the call and sends communications to the mobile terminal via the local area network and communications from the mobile terminal to the cellular carrier network via a fixed antenna (see paragraphs [0075] & [0076] and FIG. 13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include wherein when the call quality degrades to the threshold, the controller monitors communications for the mobile terminal on the cellular carrier network maintaining the call and sends communications to the

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mobile terminal via the local area network and communications from the mobile terminal to the cellular carrier network via a fixed antenna because both Robbins, Bridgelall, and Pan teach methods for routing between cellular networks and other wireless networks and the combination would allow for improved communication in mobility capable wireless voice and data networks.

Regarding claim 32 Oda, Bridgelall, and Pan teach a device as recited in claim 17 and is rejected given the same reasoning as above.

Regarding claim 332 Oda, Bridgelall, and Pan teach a device as recited in claim 18 and is rejected given the same reasoning as above

#### ***Claim Objections***

Claims 26 and 30 are objected to because of the following informalities: Claim 26 contains the letter "d" in line 3 and claim 30 contains the word "are" in line 2. Appropriate correction is required.

#### ***Response to Arguments***

Applicant's arguments with respect to claims 5-7, 10, and 12-33 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon J. Miller whose telephone number is 571-272-7869. The examiner can normally be reached on Mon.-Fri. 8:00 am to 5:00 pm.

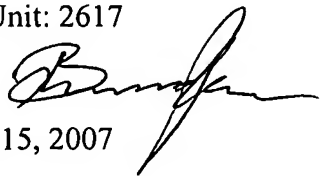
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to be "Bunfer", written over the date.

May 15, 2007

A handwritten signature in black ink, appearing to be "George Eng", written above the printed name.

GEORGE ENG  
SUPERVISORY PATENT EXAMINER